

In the Claims:

1. (original) A preparation method for a solid titanium catalyst for olefin polymerization, which comprises the steps of:
 - (1) preparing a magnesium compound solution by dissolving a magnesium halide compound into a mixed solvent of a cyclic ether and one or more of alcohol;
 - (2) preparing a carrier by, adding a mixture of titanium compound having a general formula of $Ti(OR)_aX_{(4-a)}$, in which R is an alkyl group having 1-10 carbon atoms, X is a halogen atom and a is an integer of 0-4, and halogenated hydrocarbon with the molar ratio of the halogenated hydrocarbon: the titanium compound being 1:0.05 - 1:0.95, to the magnesium compound solution at -70 - 70°C and then elevating the temperature for reaction; and
 - (3) preparing a solid titanium catalyst by reacting the carrier with a titanium compound and an electron donor.
2. (original) The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1, characterized in that the cyclic ether used in the step (1) is tetrahydrofuran or 2-methyltetrahydrofuran, and the one or more of alcohol used in the step (1) is primary or polyhydric alcohol having 2-12 carbon atoms.
3. (currently amended) The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1 ~~or~~ 2, characterized in that the molar ratio of the cyclic ether: the one or more of alcohol used in the step (1), is 1:0.1 - 1:10.
4. (original) The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1, characterized in that the halogenated hydrocarbon used in the step (2) is a halogenated hydrocarbon having 1-20 carbon atoms containing at least one halogen.

5. (new) The preparation method for a solid titanium catalyst for olefin polymerization according to claim 2, characterized in that the molar ratio of the cyclic ether: the one or more of alcohol used in the step (1), is 1:0.1 - 1:10